

Abstract of the Disclosure

5 A hierarchical communication system, arranged in a  
spanning tree configuration, is described in which wired and  
wireless communication networks exhibiting substantially  
different characteristics are employed in an overall scheme  
to link portable or mobile computing devices. Copies of  
data, program code and processing resources are migrated  
from their source toward requesting destinations based on  
request frequency, communication link costs and available  
10 local storage and/or processing resources. Each  
appropriately configured network device acts as an active  
participant in network migration. In addition, portable  
two-dimensional (2-D) code reading terminals are configured  
to wirelessly communicate compressed 2-D images toward  
15 stationary access servers that identify the code image  
through decoding and through comparison with a database of  
images that have previously been decoded and stored.